

JOHN A. LAHIVE, JR. (1928-1997)  
THOMAS V. SMURZYNSKI  
GIULIO A. DeCONTI, JR.  
ELIZABETH A. HANLEY  
AMY BAKER MANDRAGOURAS  
ANTHONY A. LAURENTANO  
KEVIN J. CANNING  
JANE E. REMILLARD  
DeANN FORAN SMITH  
DEBRA J. MILASINCIC, Ph.D.  
WILLIAM A. SCOFIELD, JR.  
SIBLEY P. REPPERT  
DAVID R. BURNS  
JOHN S. CURRAN  
SEAN D. DETWEILER  
MEGAN E. WILLIAMS, Ph.D.  
LISA DIROCCO TYNER  
HATHAWAY P. RUSSELL \*  
MARIA LACCOTRIPE ZACHARAKIS, Ph.D.

MERIDETH C. ARNOLD  
DANIELLE L. HERRITT  
EUIHOON LEE \*\*  
MANEESH GULATI  
CYNTHIA M. SOROOS  
PETER W. DINI, Ph.D.  
MICHAEL J. BASTIAN, Ph.D.  
CHRISTOPHER J. McKENNA  
VINCENT P. LOCCISANO  
JAMES M. McKENZIE

SENIOR COUNSEL  
JAMES E. COCKFIELD

OF COUNSEL  
JEREMIAH LYNCH  
JEANNE M. DIGIORGIO  
CYNTHIA L. KANIK, Ph.D.  
JOHN D. LANZA

PATENT AGENTS  
JONATHAN M. SPARKS, Ph.D.  
ANDRINA WILLIAMS ZINK  
CRISTIN E. HOWLEY, Ph.D.  
JILL ANN MELLO, Ph.D.  
CHRISTOPHER E. DRABIK

TECHNICAL SPECIALISTS  
CATHERINE M. BISHOP  
JACOB G. WEINTRAUB  
DEBORAH L. NAGLE, Ph.D.  
ANNE JACQUELINE WIZEMAN, Ph.D.  
BRIAN C. TRINQUE, Ph.D.  
CHRISTOPHER R. COWLES, Ph.D.  
JAMES H. VELEMA  
W. ELANA WANG  
CYNTHIA M. GILBERT

\* Admitted in TX only  
\*\* Admitted in CT only

September 23, 2004

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Re: U.S. Patent Application No.: 10/726,207  
For: **ACTIVE MATRIX THIN FILM TRANSISTOR ARRAY BACKPLANE**  
Inventors: Forbes, Charles, *et al.*  
Filed: December 1, 2003  
Our Ref. No.: VTW-010DV2

Dear Sir:

I enclose herewith for filing in the above-identified application the following:

1. Information Disclosure Statement;
2. PTO Form SB/08;
3. A Return Postcard.

No additional costs are believed to be due in connection with the filing of this Information Disclosure Statement. However, please charge any necessary fees in connection with the enclosed statement to our Deposit Order Account No. 12-0080. For this purpose, a duplicate of this sheet is attached.

I hereby certify that this correspondence is deposited with the United States Postal Service as first class mail in an envelope addressed to:  
MS Amendment, Commissioner for Patents, P.O. Box 1450,  
Alexandria, Virginia 22313-1450 on:  
9/23/04  
Date  
Anthony A. Laurentano  
Anthony A. Laurentano, Registration No. 38,220

Respectfully submitted,  
LAHIVE & COCKFIELD, LLP

Anthony A. Laurentano  
Anthony A. Laurentano  
Registration No. 38,220  
Attorney for Applicants



THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: Forbes, Charles, *et al.*

Serial No.: 10/726,207

Filed: December 1, 2003

For: *ACTIVE MATRIX THIN FILM TRANSISTOR  
ARRAY BACKPLANE*

Attorney Docket No.: VTW-010DV2

Group Art Unit: 2822

Examiner: NOT YET ASSIGNED

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Certificate of First Class Mailing (37 CFR §1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on the date set forth below.

9/23/04

Date of Signature and of Mail Deposit

By:



Anthony A. Laurentano  
Reg. No.: 38,200  
Attorney for Applicants

INFORMATION DISCLOSURE STATEMENT


Dear Sir:

For the Examiner's convenience in reviewing this application, Applicants submit a consolidated PTO Form SB-08, listing all references cited during the prosecution of the parent applications. The present application is a continuation of U.S. Serial No. 10/300,514, filed November 20, 2002 (Atty. Docket No. VTW-010). All references listed on the enclosed PTO Form SB-08 have been previously cited by or submitted to the Office in the prior application, and, in accordance with 37 CFR §1.98(d), copies of the of the references are not enclosed but will be provided upon request.

This statement is not to be interpreted as a representation that the cited publications are material, that an exhaustive search has been conducted, or that no other relevant information exists. Nor shall the citation of any publication herein be construed *per se* as a representation that such publication is prior art. Moreover, Applicants understand that the Examiner will make an independent evaluation of the cited publications.

Under 37 CFR § 1.97(b)(3), no additional costs are believed to be due in connection with the filing of this disclosure. If, however, a first Office Action on the merits issues in this application bearing a mailing date prior to the date of this Information Disclosure Statement, please charge any appropriate fee as required under 37 CFR § 1.17(p) to our Deposit Order Account No. 12-0080.

Respectfully submitted,  
LAHIVE & COCKFIELD, LLP

  
Anthony A. Laurentano  
Registration No.: 38,220  
Attorney for Applicants

28 State Street  
Boston, MA 02109  
(617) 227-7400

Date: 9/23/04  
AAL/DRB/rl



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Substitute for form 1449A/B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/726,207
				Filing Date	December 1, 2003
				First Named Inventor	Forbes, Charles
				Art Unit	2822
				Examiner Name	Not Yet Assigned
Sheet	1	of	4	Attorney Docket Number	VTW-010DV2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	A1	4,126,854	11-21-1978	SHERIDON, N.K.	
	A2	4,143,103	03-06-1979	SHERIDON, N.K.	
	A3	4,298,448	11-03-1981	MYELLER, K., et al.	
	A4	4,435,047	03-06-1984	FERGASON, J.L.	
	A5	5,213,853	05-25-1983	NOONAN, J.M.	
	A6	5,262,098	11-16-1993	CROWLEY, J.M., et al.	
	A7	5,344,594	09-06-1994	SHERIDON, N.K.	
	A8	5,437,811	08-01-1995	DOANE, J.W., et al.	
	A9	5,641,974	06-24-1997	DEN BOER, W., et al.	
	A10	5,680,185	10-21-1997	KOBAYASHI, H., et al.	
	A11	5,729,242	03-17-1998	MARGERUM, J.D., et al.	
	A12	5,751,257	05-12-1998	SUTHERLAND, J.W.	
	A13	5,776,803	07-07-1998	YOUNG, N.D.	
	A14	5,796,121	08-18-1998	GATES, S.M.	
	A15	5,825,529	10-20-1998	CROWLEY, J.M.	
	A16	5,856,858	01-05-1999	CAREY, P.G., et al.	
	A17	6,025,896	02-15-2000	HATTORI, Y., et al.	
	A18	6,080,606	06-27-2000	GLESKOVA, H., et al.	
	A19	6,087,196	07-11-2000	STURM, J.C., et al.	
	A20	6,089,453	07-18-2000	KAYSER, K.W., et al.	
	A21	6,118,426	09-12-2000	ALBERT, J.D., et al.	
	A22	6,124,851	09-26-2000	JACOBSON, J.M.	
	A23	6,140,899	10-31-2000	KAYSER, K.W., et al.	
	A24	6,181,299 B1	01-30-2001	FREDERICK, W.R., et al.	
	A25	6,253,190 B1	06-26-2001	SUTHERLAND, J.W.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
	A26	WO 98/03896 A1	01-29-1998	JACOBSON, J.M.		

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	A27	BAEUERLE, P.A., et al. "4.3: A MIM-driven transmissive display with color filters on 2-in.-diagonal plastic substrates." SID 99 Digest, pp. 414-17.	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/726,207
				Filing Date	December 1, 2003
				First Named Inventor	Forbes, Charles
				Art Unit	2822
				Examiner Name	Not Yet Assigned
Sheet	2	of	4	Attorney Docket Number	VTW-010DV2

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>2</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)					
	B1	WO	98/41898 A2	09-24-1998	JACOBSON, J.M., <i>et al.</i>		
	B2	WO	99/10769 A1	09-12-2000	ALBERT, J.D., <i>et al.</i>		
	B3	WO	00/16189 A1	03-23-2000	GELBMAN, A.		
	B4	WO	00/26761 A1	05-11-2000	ALBERT, J.D., <i>et al.</i>		
	B5	WO	00/36465 A1	06-22-2000	DRZAIC, P., <i>et al.</i>		
	B6	WO	00/36666 A1	06-22-2000	DRZAIC, P., <i>et al.</i>		
	B7	WO	00/46854 A1	08-10-2000	HADLEY, M.A., <i>et al.</i>		
	B8	WO	00/49421 A1	08-24-2000	SMITH, J.S.		
	B9	WO	00/49658 A1	08-24-2000	SMITH, J.S.		
	B10	WO	00/55915 A1	09-21-2000	JACOBSEN, J., <i>et al.</i>		
	B11	WO	00/55916 A1	09-21-2000	JACOBSEN, J., <i>et al.</i>		
	B12	WO	00/67110 A1	11-09-2000	COMISKEY, B., <i>et al.</i>		
	B13	WO	00/67327 A1	11-09-2000	DRZAIC, P., <i>et al.</i>		
	B14	EP	1058147 A2	12-06-2000	STEPHENSON, S.W.		
	B15	WO	01/07961 A1	02-01-2001	AMUNDSON, K., <i>et al.</i>		
	B16	WO	01/08241 A1	02-01-2001	DRZAIC, P., <i>et al.</i>		
	B17	WO	01/08242 A1	02-01-2001	AMUNDSON, K., <i>et al.</i>		
	B18	WO	01/17029 A1	03-08-2001	AMUNDSON, K., <i>et al.</i>		
	B19	WO	01/17040 A1	03-08-2001	AMUNDSON, K., <i>et al.</i>		
	B20	WO	01/17041 A1	03-08-2001	AMUNDSON, K., <i>et al.</i>		
	B21	WO	01/33621 A2	05-10-2001	SMITH, J.S.		
	B22	WO	01/80287 A2	10-25-2001	JACOBSON, J.M., <i>et al.</i>		

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	B23	CHEN, <i>et al.</i> "12.2: A conformable electronic ink display using a foil-based a-Si TFT array." SID 01 Digest, pp. 157-159.	
	B24	COMISKEY, <i>et al.</i> "An electrophoretic ink for all-printed reflective electronic displays." Nature, 1998; vol. 394, pp. 253-255.	
	B25	FORBES, <i>et al.</i> "43.3: A rugged conformable backplane fabricated with an a-Si:H TFT array on a polyimide substrate." SID 02 Digest, pp. 1-4.	
	B26	GLESKOVA, <i>et al.</i> "Electrophotographic patterning of a-Si:H." Mat. Res. Soc. Symp. Proc., 1995; vol. 377, pp. 719-724.	
	B27	GLESKOVA, <i>et al.</i> "Electrophotographic patterning of thin-film silicon on glass foil." IEEE Electron Device Letters, 1995; vol. 16(10), pp. 418-420.	
	B28	GLESKOVA, <i>et al.</i> "Electrophotographic patterning of a-Si:H." AMLCDs 1995 Workshop Proceedings, 1995; pp. 16-19.	
	B29	GLESKOVA, <i>et al.</i> "Electrophotographically patterned thin-film silicon transistors." IEEE Electron Device Letters, 1996; vol. 17(6), pp. 264-266.	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/726,207
				Filing Date	December 1, 2003
				First Named Inventor	Forbes, Charles
				Art Unit	2822
				Examiner Name	Not Yet Assigned
Sheet	3	of	4	Attorney Docket Number	VTW-010DV2

C1	GLESKOVA, <i>et al.</i> "a Si:H TFT fabricated by electrophotographic printing." Display Manufacturing Technology Conference. Digest of Technical Papers. 1996; pp. 97-98.
C2	GLESKOVA, <i>et al.</i> "a Si:H TFTs patterned using laser-printed toner." Mat. Res. Soc. Symp. Proc., 1997; vol. 424, pp. 71-76.
C3	GLESKOVA, <i>et al.</i> "a Si:H TFTs made on polyimide foil by pe-cvd at 150°C." Mat. Res. Soc. Symp. Proc., 1998; vol. 508, pp. 73-78.
C4	GLESKOVA, <i>et al.</i> "Photoresist-free fabrication process for a-Si:H thin film transistors." Journal of Non-Crystalline Solids, 1998; vol. 227-230, pp. 1217-1220.
C5	GLESKOVA, <i>et al.</i> "Rugged a-Si:H TFTs on plastic substrates." Mat. Res. Soc. Symp. Proc., 1999; vol. 557, pp. 653-658.
C6	GLESKOVA, <i>et al.</i> "Amorphous silicon thin-film transistors on compliant polyimide foil substrates." IEEE Electron Device Letters, 1999; vol. 20(9), pp. 473-475.
C7	GLESKOVA, <i>et al.</i> "Failure resistance of amorphous silicon transistors under extreme in-plane strain." Applied Physics Letters, 1999; vol. 75(19), pp. 3011-3013.
C8	GLESKOVA, <i>et al.</i> "a-Si:H thin-film transistors after very high strain." Journal of Non-Crystalline Solids, 2000; vol. 266-269, pp. 1320-1324.
C9	GLESKOVA, <i>et al.</i> "a Si:H TFTs on polyimide foil: Electrical performance under mechanical strain." Asia Display/IDW '01, 2001; pp. 331-334.
C10	GLESKOVA, <i>et al.</i> "Low-temperature silicon nitride for thin-film electronics on polyimide foil substrates." Applied Surface Science, 2001; vol. 175-176, pp. 12-16.
C11	GLESKOVA, <i>et al.</i> "Electrical stability of a-Si:H TFTs fabricated at 150°C." Res. Soc. Symp. Proc., 2001; vol. 664, pp. A19.7.1-A19.7.6.
C12	GLESKOVA, <i>et al.</i> "150°C Amorphous silicon thin-film transistor technology for polyimide substrates." Journal of the Electrochemical Society, 2001; vol. 148(7), pp. G370-G374.
C13	GLESKOVA, <i>et al.</i> "DC-gate-bias stressing of a-Si:H TFTs fabricated at 150° on polyimide foil." IEEE Transactions on electron devices, 2001; vol. 48(8), pp. 1667-1671.
C14	GLESKOVA, <i>et al.</i> "Electrophotographically printed insulator." Materials Letters, 2002; vol. 52, pp. 150-153.
C15	GLESKOVA, <i>et al.</i> "Electrical response of amorphous silicon thin-film transistors under mechanical strain." Journal of Applied Physics, 2002; vol. 92(10), pp. 6224-6229.
C16	GLESKOVA, <i>et al.</i> "Effects of mechanical strain on amorphous silicon thin-film transistors." Mat. Res. Soc. Symp. Proc., 2002; vol. 715, pp. 667-677.
C17	GLESKOVA, <i>et al.</i> "Electron mobility in amorphous silicon thin-film transistors under compressive strain." Applied Physics Letters, 2001; vol. 79(20), pp. 3347-3349.
C18	HSU, <i>et al.</i> "Amorphous Si TFTs on plastically deformed spherical domes." Journal of Non-Crystalline Solids, 2002; vol. 299-302, pp. 135501359.
C19	SAZONOV, <i>et al.</i> "Fabrication of a-Si:H TFTs at 120°C on flexible polyimide substrates." Mat. Res. Soc. Symp. Proc., 2000; vol. 558, pp. 375-381.
C20	SHEN, <i>et al.</i> "Patterning of a-Si:H by laser printing." SID Digest of Technical Papers, 1995; pp. 587-590.
C21	STURM, <i>et al.</i> "Three-dimensional electronic surfaces." Mat. Res. Soc. Symp. Proc., 2001; vol. 636, pp. D11.4.1-D11.4.12.
C22	STURM, <i>et al.</i> "Enabling technologies for plastic displays." Proc. SPIE, 2002; vol. 4712, pp. 222-236.
C23	SUO, <i>et al.</i> "Mechanics of rollable and foldable film-on-foil electronics." Applied Physics Letters, 1999; vol. 74(8), pp. 1177-1179.
C24	THEISS, <i>et al.</i> "Polysilicon thin-film transistors fabricated at 100°C on a flexible plastic substrate." IEDM, 1998; pp. 257-260.
C25	THOMASSON, <i>et al.</i> "Tri-layer a-Si:H TFTs on polymeric substrates." 56th Device Research Conference Digest, June 1998; pp. 126-127.
C26	WAGNER, <i>et al.</i> "Compliant substrates for thin-film transistor backplanes." In <u>Flat panel display technology and display metrology</u> . Proceedings of SPIE, 1999; vol. 3636, pp. 32-39.
C27	WAGNER, <i>et al.</i> "Low temperature amorphous and nanocrystalline silicon technology for flat panel displays." SID 20 <sup>th</sup> International Display Research Conference, 2000; pp. 402-405.

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/726,207
				Filing Date	December 1, 2003
				First Named Inventor	Forbes, Charles
				Art Unit	2822
				Examiner Name	Not Yet Assigned
Sheet	4	of	4	Attorney Docket Number	VTW-010DV2

	D1	WAGNER, <i>et al.</i> "Novel processing technology for macroelectronics." In <u>Technology and applications of amorphous silicon</u> , Street (ed.) Springer, 2000, pp. 222-251.	
	D2	WAGNER, <i>et al.</i> "Silicon thin-film transistors on flexible foil substrates." IMID '02 Digest of Technical Papers, pp. 263-267.	
	D3	WAGNER, <i>et al.</i> "Thin-film transistors and flexible electronics." In <u>Growth, Characterization and Electronic Applications of Si-based Thin Films</u> , Bergmann (ed.), 2002; pp. 1-14.	
	D4	WAGNER, <i>et al.</i> "Silicon for thin-film transistors." 2 <sup>nd</sup> International Conference on Cat-CVD (hot-wire CVD) process, 2002; pp. 1-6.	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--